

Application No. 10/613,773
Amendments Dated October 21, 2005
Reply to Office Action of July 18, 2005

REMARKS/ARGUMENTS

Claims

Claims 1-42 are pending in the application.

Claims 18-34 are currently cancelled.

Claims 1-17 and 35-42 remain in the application.

Claims 1-13, 15-17, 35 and 37-42 are as previously presented.

Claims 14 and 36 are currently amended.

Claim Objections

Claim 14 is being objected because it contains the language "is so mounted" which is considered not clear. The Applicants understand the arguments of the Examiner and have corrected claim 14 accordingly. No new matter was added.

Claim Rejections – 35 USC § 112

Claims 18-34 and 36-42 have been rejected by the Examiner for failing to point out and distinctly claim the subject matter which the Applicants regard as the invention.

Claims 18-34

The Examiner has found that claims 18-34 are unclear since the concept of movement detector lacks clarity. The Examiner is thus unsure as to how to construe claims 18-34.

The Applicants refer the Examiner to paragraphs 0040 to 0042 of the application. In paragraphs 0040 to 0042, the Applicants disclose another embodiment of the present invention in which the

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access point is fixed. For example, the access point could be installed on the ceiling of a warehouse. Since this access point is fixed, it does not need to regularly verify its position since its position does not change over time (i.e. a warehouse is not supposed to move). However, this access point contains a movement detector to detect any movements of the access point should someone try to displace it. This movement detector is not used to monitor the movements of the cargos under the surveillance of the access point.

The Applicants thus cancel claims 18-34, without prejudice, since they refer to another embodiment of the present invention. The Applicants however reserve themselves the right to file a divisional application based on these cancelled claims.

Claims 36-42

The Examiner has rejected claims 36-42 for being indefinite since the steps involve "creating a virtual fence around the cargo" and "obtaining dead reckoning data" when the cargo exits the virtual fence. The Examiner finds unclear how cargo could exit a virtual fence since the virtual fence is around the cargo.

Concerning these claims, the Examiner is referred to paragraphs 0044 to 0047 and to figures 1 and 2 for the definition of the virtual fence (elements 60 and 64 respectively). In a nutshell, the virtual fence is preferably the range of the radio-frequency signals sent by the access point. As long as the tracking device can receive this RF signal, it is considered to be inside the virtual fence. However, if someone steals the cargo and thus move the cargo far enough away for the tracking device to be unable to receive the RF signal of the access point, the cargo is now defined to be outside the virtual fence or to have exited the virtual fence. It is to be understood that the virtual fence is not a physical fence.

The Applicants respectfully believe that claims 36-42 are clear when construed according to the definition of the virtual fence disclosed in the description, particularly paragraphs 0044 to 0047.

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In any event, the Applicants have amended claim 36 to replace "around the cargo" in line 4 by "around an area where the cargo is located" to further clarify this concept.

The Applicants respectfully request that the rejection of claims 36-42 based on indefiniteness be withdrawn.

Claim Rejections – 35 USC § 103

Claims 1 to 42 have been rejected under 35 USC §103(a) as being obvious over the British patent no. GB 2,025,185, granted to Friedbert Becker, Jan Steinkamp and Peer Thilo (hereinafter "Becker"), in view of the US patent no. 6,738,628 granted to Colin David McCall, Andrew Liam Massey and Neil Lindsay Robertson (hereinafter "McCall"), in further view of any one of the following patents: US patent application no. 2003/0091010 filed by Masood Garahi and Peter J. Stanforth (hereinafter "Garahi"), US patent application no. 2003/0006931 filed by Ken Mages (hereinafter "Mages"), US patent application no. 2002/0113735 filed by Michael P. Spratt (hereinafter "Spratt") and European patent application no. EP 0 814 346 filed by Salman Youssef Abbasi (hereinafter "Abbasi") and in further view of US patent no. 6,850,844 granted to Thomas H. Walters, Cliff A. Pemble and Min H. Kao (hereinafter "Walters").

Claims 1 to 42 have been rejected under 35 USC §103(a) as being obvious over the US patent no. 4,107,689, granted to Ernest Jellinek (hereinafter "Jellinek"), in view of the US patent no. 6,738,628 granted to Colin David McCall, Andrew Liam Massey and Neil Lindsay Robertson (hereinafter "McCall"), in further view of any one of the following patents: US patent application no. 2003/0091010 filed by Masood Garahi and Peter J. Stanforth (hereinafter "Garahi"), US patent application no. 2003/0006931 filed by Ken Mages (hereinafter "Mages"), US patent application no. 2002/0113735 filed by Michael P. Spratt (hereinafter "Spratt") and European patent application no. EP 0 814 346 filed by Salman Youssef Abbasi (hereinafter "Abbasi") and

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in further view of US patent no. 6,850,844 granted to Thomas H. Walters, Cliff A. Pemble and Min H. Kao (hereinafter "Walters").

Claims 1 to 42 have been rejected under 35 USC §103(a) as being obvious over the US patent no. 3,961,166, granted to Charles R. Stobart (hereinafter "Stobart"), in view of the US patent no. 6,738,628 granted to Colin David McCall, Andrew Liam Massey and Neil Lindsay Robertson (hereinafter "McCall"), in further view of any one of the following patents: US patent application no. 2003/0091010 filed by Masood Garahi and Peter J. Stanforth (hereinafter "Garahi"), US patent application no. 2003/0006931 filed by Ken Mages (hereinafter "Mages"), US patent application no. 2002/0113735 filed by Michael P. Spratt (hereinafter "Spratt") and European patent application no. EP 0 814 346 filed by Salman Youssef Abbasi (hereinafter "Abbasi") and in further view of US patent no. 6,850,844 granted to Thomas H. Walters, Cliff A. Pemble and Min H. Kao (hereinafter "Walters").

The Examiner has generally rejected claims 1-42 as being obvious in view of the combined teachings of the aforementioned patents and patent applications.

First, the Applicants would like to specify that based on *Ex parte Gottling*, it is the duty of the Examiner to disclose and show how and why the person skilled in the art would have combined the above-mentioned patents and/or patent applications in order to obtain the Applicants' invention. More precisely, as the Board of Patent Appeals and Interferences stated: "Obviousness cannot be established by combining prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. The mere fact that the prior art may be modified in the manner suggested by an examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." (*Ex parte Gottling* (B.P.A.I. 2005)) (our underlining).

The Applicants respectfully believe that even if the Examiner has found several pieces of prior art which individually teaches some of the components and limitations of the present invention, the

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Examiner has failed to show why someone skilled in the art would have combined all these patents and patent applications in order to devise a novel cargo protection system and method.

In fact, the Applicants respectfully believe that there is no such obvious desirability to combine the cited patents and patent applications in order to produce the claimed invention.

To begin with, the systems disclosed by either Becker, Jellinek or Stobart all teach vehicle location apparatuses in which the dead-reckoning data are updated when the apparatus is in the proximity of some location beacons. In these systems, the apparatuses can also transmit their position to a "base station" via a RF link.

In the system of McCall, an asset, comprising a tracking device receives signal from at least one position beacon. The asset determines the ID of the beacon (or beacons) included in the beacon's signal. The asset sends the beacon ID to a central server which further determines the position of the asset using the known position of the given beacon. In the system of McCall, the access points used by the asset to send its beacon ID to the server can be collocated with the beacons.

The systems taught by either Garahi, Mages, Spratt or Abbasi generally disclose the concept of mobile access points combined with GPS receiver.

Finally, the system of Walters generally discloses a navigation device which provides the current position of the user using a GPS when the GPS signals are available and using a dead-reckoning system when the GPS signal is unavailable or fatally degraded. Thus, the device of Walters alternates between GPS and dead-reckoning to provide position information depending on the availability of the GPS signal.

From the above, it could appear that all the components of the Applicants' invention are known and that it would have been obvious to combine all these teachings in order to produce the claimed subject matter.

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First, the Applicants' invention is not directed to any specific components. In fact, the Applicants' understand that the components that comprise their invention are generally all commercially available. Dead-reckoning devices, GPS module, network equipments can all be readily purchased.

Secondly, the Applicants' invention is not specifically directed to concepts such as combining an access point with a location providing beacon or combining a mobile access point with a GPS module. In any case, the Applicants understand that combining individual devices into a single device which does not provide new and unexpected results is not patentable *per se*.

Thirdly, what the Applicants want to protect is a novel way to protect cargo and to track it should it be stolen. The title of the application is explicit on that matter: "System and Method for Cargo Protection". Furthermore, the preamble of independent claims 1 and 35 is "A system for the protection of cargo..." It is understood that the preamble generally does not provide patentable distinction but in this case, it, at the very least, describes the objective of the invention, which is to protect and track cargo. Therefore, it should be the duty of the Examiner to show the desirability to combined the cited patents and patent applications in order to provide a novel system to protect cargo.

Finally, the Applicants also understand that their invention is a combination patent in which existing components are assembled in order to provide a new and useful system (and method).

Based on the above, the Applicants respectfully disagree with the Examiner when the Examiner declares that it would have been obvious to combine all the cited patents and patent applications in order to produce the claimed invention.

Concerning the patents of Becker, Jellinek and Stobart, they are all directed to various vehicle location apparatuses or devices wherein the position given by their dead-reckoning modules are updated or reset when the vehicle passes in the vicinity of a position beacon. The vehicle can also send its position to a base station using a RF link.

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In these devices, the dead-reckoning modules are working generally most of the time and are updated when possible (i.e. when the vehicle crosses a beacon). In the system of the Applicants, the tracking device is in constant communication with the access point equipped with a GPS module (i.e. a beacon) which sends the tracking device its current position. When the tracking device does not receive a signal from the access point, it presumes that the cargo to which it is "attached" has been stolen and starts its dead-reckoning module with the last GPS position as a starting point. The tracking device then sends, using for example a cellular link, to a central server its current position estimated by the dead-reckoning module. The central server can then inform the cargo owner and/or the police about the estimated location of the stolen cargo. It thus clearly appears that the Applicants' invention and the patents of either Becker, Jellinek or Stobart are teaching away from each other. First, in either Becker, Jellinek or Stobart, the dead-reckoning module is always active and is the main source of position information. The dead-reckoning module of either Becker, Jellinek or Stobart is updated when it crosses a position beacon. In fact, the beacons are used to correct the estimated position of the vehicle. In the Applicants' invention, the device is normally always in communication with the beacon and only when this communication is lost is the dead-reckoning module activated. Secondly, in the system of either Becker, Jellinek or Stobart, the tracking device communicates its position to the central server whether it has crossed a beacon or not. In fact, their tracking device could possibly stay in a place without beacon for a certain period of time without any problem whereas in the system of the Applicants, as soon as the tracking device does not detect the access point signal, it starts its dead-reckoning module and communicates its position to the central server. In the system of either Becker, Jellinek or Stobart, the beacon is used as a position correcting device whereas in the system of the Applicants, the "beacon" is used as a monitoring device. Hence, the components of each system are similar but the way they are used are fundamentally different.

Concerning the teaching of McCall, it specifically teaches an indoor tracking system to track and locate assets. It is understood that McCall teaches that the beacon and the access point can be combined in a single and thus less expensive device. However, McCall also teaches an indoor

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tracking system (see column 5, lines 2-5). Moreover, McCall specifically teaches away from using GPS technology since he stated, in column 2, lines 16-29:

"Radio location solutions such as the Global Positioning System (GPS) can locate an asset to a very high degree of accuracy, and lightweight GPS implementations are inexpensive, but GPS does not work inside buildings. Other radio based location systems like Decca or Loran require expensive, specialised, radio frequency circuitry at both the beacon and the asset. Many radio based location systems depend on the use of directional antennae, either mechanically rotated or phased arrays.

It would be desirable to provide an asset tracking system that did not require the use of dedicated hardware such as cell controllers and also did not require hardware that was required to use a precise time reference in order to determine the location of the tag." (emphasis added)

From the above citations, it is clear that the system of McCall is directed to an indoor system whereas the systems of either Becker, Jellinek or Stobart are directed to outdoor system. Moreover, McCall does not hint at the use of dead-reckoning module in his tracking system. As a matter of fact, McCall teaches the opposite when he specifies the use of a dense array of beacons (column 2, lines 53-57). Thus, no desirability to combine all these patents seems to be present. In fact, they teach away from each other.

Concerning the teachings of Garahi, Mages, Spratt and Abbasi, they all generally teach the concept of mobile network access points combined with GPS functionalities. The Examiner stated that it would have been obvious to combine the teaching of either Becker, Jellinek or Stobart with the teaching of either Garahi, Mages, Spratt or Abbasi in order to provide a beacon/access point with GPS functionalities.

First, the Applicants respectfully believe that the beacon of either Becker, Jellinek or Stobart are not access point in the sense of networking device. Notwithstanding this fact, the Applicants wish to point that nowhere in the patents of either Becker, Jellinek or Stobart do they hint at using

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mobile beacons. In fact, they teach the opposite. In figure 2 of Becker, the beacon is attached to a light post. In Jellinek, column 3, lines 9-12, the beacons are installed on signpost (see also the beacons specific deployment of Fig. 3). Finally, in Stobart, column 2, lines 32-34, it is stated that the beacons (transmitters) are located at predetermined positions. Thus, there is no desirability emanating from the teachings of either Becker, Jellinek or Stobart to use mobile beacons. Moreover, adding GPS functionalities to the beacons of Becker, Jellinek or Stobart would be useless since the beacons are already installed at predetermined locations and that their sole objective is already to provide precise location information. Adding GPS functionalities would be costly, redundant and most of all, useless. In fact, in the Applicants description, it is specifically stated that should the access point be installed in a fixed location (i.e. a warehouse), no GPS module would be needed (see paragraph 0041). Hence, from the above, it is clear that there is no desirability to combine the teachings of either Becker, Jellinek or Stobart with the teachings of either Garahi, Mages, Spratt and Abbasi.

Finally, concerning the patent of Walters, it generally teaches a portable navigation device which uses GPS position information when the GPS signals are available and uses dead-reckoning position information when the GPS signals are not available or at least degraded. The device reverts back to GPS position information when the GPS signals are available.

First, the Applicants are not sure if the prior art of Walters is directed against the embodiment of claims 18-34 or against all the embodiments in general. The reason for this uncertainty is the fact that the Examiner used the dead-reckoning functionalities disclosed by Walters to provide "indication of movement" when GPS signals are unavailable. The only claim referring to detection of movement is claim 18. However, claim 18 is now cancelled.

In any case, should the teaching of Walters be directed against all the embodiments, the Applicants respectfully believe that there is no desirability to combine the teaching of Walter with the teaching of either Becker, Jellinek or Stobart. First, it has already been demonstrated that the teachings of either Becker, Jellinek or Stobart never hinted at the use of GPS to obtain precise location information. Quite the opposite, the teachings of either Becker, Jellinek or

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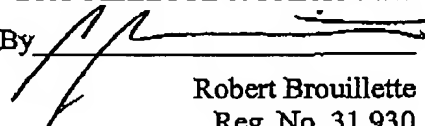
Stobart specifically disclose the use of fixed beacons to provide location information. Moreover, adding GPS functionalities to the tracking devices of either Becker, Jellinek or Stobart would create a new system altogether since the use of fixed beacons would be obsolete. However, this new system would be different from the one of the Applicants since in the system of the Applicants, the tracking device does not comprise GPS functionalities.

Overall, the Applicants respectfully believe that there exists no desirability to combine either of the cited patents or patent applications in order to produce the claimed invention. More precisely, no patent or patent application, either alone or combined, teaches a system and method to protect and track cargo in which the tracking device (placed in the cargo) uses dead-reckoning position measurements when the tracking device loses its communication link with the GPS position providing access point. Moreover, in the system of the Applicants, the tracking device contacts the central server only when the communication link between the tracking device and the access point is lost.

Considering the above arguments, the Applicant respectfully requests that a timely Notice of Allowance be issued in this case for all pending claims.

Respectfully submitted,

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P.S.: A petition for a 1 month extension of time has been filed on October 20, 2005, with respect to this file.